

# Notice of Allowability

Application No.

10/725,239

Applicant(s)

LIN ET AL.

Examiner

Michael D Masinick

Art Unit

2125

## -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 1/22/2004.
2. ☒ The allowed claim(s) is/are 1-5, 7-17, 19-29, 31-36.
3. ☒ The drawings filed on 01 December 2003 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

### Attachment(s)

- |   |  |
|---|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____. |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date <u>1/22/2004</u> | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment                    |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material                                | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance   |
|   | 9. <input type="checkbox"/> Other _____.   |

### EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Daniel McClure on March 11<sup>th</sup>, 2005.

The application has been amended as follows:

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#### Listing of Claims

1. (Currently Amended) A computer-implemented method of calculating lot hold time, comprising using a computer to perform the steps of :

inputting a plurality of identification parameters of a lot;

calculating a lot hold time of the lot according to the identification parameters, wherein the calculating further comprises

calculating a first hold time according to an identification code and a reference database;

determining if the lot is a child lot according to the identification code;

calculating an inherited hold time according to the identification code and the reference database if the lot is a child lot; and

outputting the sum of the first hold time and the inherited hold time as the lot hold time if the lot is a child lot or outputting the first hold time as the lot hold time if the lot is not a child lot.

~~outputting the lot hold time.~~

2. (Original) The computer-implemented method as claimed in claim 1, wherein the lot is a split child lot.

3. (Original) The computer-implemented method as claimed in claim 1, wherein the lot is passed through a first lot hold and a last lot hold, the first lot hold having a start time, the last lot hold having a termination time.

4. (Original) The computer-implemented method as claimed in claim 1, wherein the lot is passed through a first customer lot hold and a last customer lot hold, the first customer lot hold having a customer start time, the last customer lot hold having a customer termination time.

5. (Original) The computer-implemented method as claimed in claim 1, wherein the identification parameters comprise an identification code of the lot and a customer hold code of the lot.

6. (Canceled).

7. (Currently Amended) The computer-implemented method as claimed in claim [[6]] 1, wherein step of calculating the first hold time further comprises the steps of:  
obtaining the start time of the first lot hold from the reference database;  
obtaining the termination time of the last lot hold from the reference database; and  
calculating the first hold time according to the start time of the first lot hold and the termination time of the last lot hold.

8. (Currently Amended) The computer-implemented method as claimed in claim [[6]] 1, wherein the reference database is enabled by a MES database.

9. (Currently Amended) The computer-implemented method as claimed in claim 1, ~~wherein the calculating step further comprising comprises:~~  
~~calculating a first hold time according to the identification code and a reference database;~~  
~~calculating a customer hold time according to the customer hold code and the reference database;~~

Art Unit: 2125

~~determining if the lot is a child lot according to the identification code;~~  
~~calculating an inherited hold time according to the identification code and the reference database if the lot is a child lot;~~  
designating a second hold time as the sum of the first hold time and the inherited hold time if the lot is a child lot; and  
outputting the second hold time and the customer hold time as the hold time if the lot is a child lot or outputting the first hold time and the customer hold time as the hold time if the lot is not a child lot.

10. (Original) The computer-implemented method as claimed in claim 9, wherein step of calculating the first hold time further comprises the steps of:

obtaining the start time of the first lot hold from the reference database;  
obtaining the termination time of the last lot hold from the reference database;  
calculating the first hold time according to the start time of the first lot hold and the termination time of the last lot hold.

11. (Original) The computer-implemented method as claimed in claim 9, wherein step of calculating the customer hold time further comprises the steps of:

obtaining the customer start time of the customer first lot hold from the reference database;  
obtaining the customer termination time of the last customer lot hold from the reference database; and  
calculating the customer hold time according to the customer start time of the customer first lot hold and the customer termination time of the last customer lot hold.

12. (Original) The computer-implemented method as claimed in claim 9, wherein the reference database is enabled by a MES database.

13. (Currently Amended) A computer program embodied on a computer-readable storage medium for storing a computer program providing for carrying out a method of

Art Unit: 2125

calculating a lot hold time, the computer program comprising ~~using code for instructing~~ a computer to perform the steps of:

inputting a plurality of identification parameters of a lot;

calculating lot hold time of the lot according to the identification parameters, wherein the calculating further comprises

calculating a first hold time according to an identification code and a reference database;

determining if the lot is a child lot according to the identification code;

calculating an inherited hold time according to the identification code and the reference database if the lot is a child lot; and

outputting the sum of the first hold time and the inherited hold time as the lot hold time if the lot is a child lot or outputting the first hold time as the lot hold time if the lot is not a child lot.

~~outputting the lot hold time.~~

14. (Currently Amended) The computer program storage medium as claimed in claim 13, wherein the lot is a split child lot.

15. (Currently Amended) The computer program storage medium as claimed in claim 13, wherein the lot is passed through a first lot hold and a last lot hold, the first lot hold having a start time, the last lot hold having a termination time.

16. (Currently Amended) The computer program storage medium as claimed in claim 13, wherein the lot is passed through a first customer lot hold and a last customer lot hold, the first customer lot hold having a customer start time, the last customer lot hold having a customer termination time.

17. (Currently Amended) The computer program storage medium as claimed in claim 13, wherein the identification parameters comprise an identification code of the lot and a customer hold code of the lot.

18. (Canceled).

19. (Currently Amended) The computer program storage medium as claimed in claim [[18]] 13, wherein the calculating step of the first hold time further comprises the steps of:  
obtaining the start time of the first lot hold from the reference database;  
obtaining the termination time of the last lot hold from the reference database; and  
calculating the first hold time according to the start time of the first lot hold and the termination time of the last lot hold.

20. (Currently Amended) The computer program storage medium as claimed in claim [[18]] 13, wherein the reference database is enabled by a MES database.

21. (Currently Amended) The computer program storage medium as claimed in claim 13, wherein the calculating step further comprises step of further comprising:  
~~calculating first hold time according to the identification code and a reference database;~~  
calculating a customer hold time according to the customer hold code and the reference database;  
~~determining if the lot is a child lot according to the identification code;~~  
~~calculating inherited hold time according to the identification code and the reference database if the lot is a child lot;~~  
designating a second hold time as the sum of the first hold time and the inherited hold time if the lot is a child lot; and  
outputting the second hold time and the customer hold time as the hold time if the lot is a child lot or outputting the first hold time and the customer hold time as the hold time if the lot is not a child lot.

22. (Currently Amended) The computer program storage medium as claimed in claim 21, wherein step of calculating the first hold time further comprises the steps of:  
obtaining the start time of the first lot hold from the reference database;  
obtaining the termination time of the last lot hold from the reference database; and

Art Unit: 2125

calculating the first hold time according to the start time of the first lot hold and the termination time of the last lot hold.

23. (Original) The computer program storage medium as claimed in claim 21, wherein step of calculating the customer hold time further comprises the steps of:

obtaining the customer start time of the customer first lot hold from the reference database;

obtaining the customer termination time of the last customer lot hold from the reference database; and

calculating the customer hold time according to the customer start time of the customer first lot hold and the customer termination time of the last customer lot hold.

24. (Original) The computer program storage medium as claimed in claim 21, wherein the reference database is enabled by a MES database. 25. (Currently Amended) A

computer system for [[of]] calculating lot hold time, comprising:

an input module, inputting a plurality of identification parameters of a lot;

a calculation module, calculating lot hold time of the lot according to the identification parameters, the calculation module further comprising

a first calculation module, calculating first hold time according to the identification code and a reference database;

a determination module, determining if the lot is a child lot according to the identification code;

a child lot calculation module, calculating inherited hold time according to the identification code and the reference database if the lot is a child lot; and

a child lot output module, outputting the sum of the first hold time and the inherited hold time as the hold time if the lot is a child lot; and

a non-child lot output module, outputting the first hold time as the hold time if the lot is not a child lot.

an output module, outputting the lot hold time.

Art Unit: 2125

25. (Currently Amended) A computer system for [[of]] calculating lot hold time, comprising:

an input module, inputting a plurality of identification parameters of a lot;

a calculation module, calculating lot hold time of the lot according to the identification parameters, the calculation module further comprising

a first calculation module, calculating first hold time according to the identification code and a reference database;

a determination module, determining if the lot is a child lot according to the identification code;

a child lot calculation module, calculating inherited hold time according to the identification code and the reference database if the lot is a child lot; and

a child lot output module, outputting the sum of the first hold time and the inherited hold time as the hold time if the lot is a child lot; and

a non-child lot output module, outputting the first hold time as the hold time if the lot is not a child lot.

~~an output module, outputting the lot hold time.~~

26. (Currently Amended) The computer system as claimed in claim 25, wherein the lot is a split child lot.

27. (Currently Amended) The computer system as claimed in claim 25, wherein the lot is passed through a first lot hold and a last lot hold, the first lot hold having a start time, the last lot hold having a termination time.

28. (Currently Amended) The computer system as claimed in claim 25, wherein the lot is passed through a first customer lot hold and a last customer lot hold, the first customer lot hold having a customer start time, the last customer lot hold having a customer termination time.



Art Unit: 2125

29. (Currently Amended) The computer system as claimed in claim 25, wherein the identification parameters comprise an identification code of the lot and a customer hold code of the lot.

30. (Canceled).

31. (Currently Amended) The computer system as claimed in claim ~~[[30]]~~ 25, wherein the first calculation module further obtains the start time of the first lot hold from the reference database, obtains the termination time of the last lot hold from the reference database, and calculates the first hold time according to the start time of the first lot hold and the termination time of the last lot hold.

32. (Currently Amended) The computer system as claimed in claim ~~[[30]]~~ 25, wherein the reference database is enabled by a MES database.

33. (Currently Amended) The computer The system as claimed in claim 25, wherein ~~the calculation module further comprises~~ further comprising:

~~a first calculation module, calculating first hold time according to the identification code and a reference database;~~

a customer calculation module, calculating customer hold time according to the customer hold code and the reference database; and

~~a determination module, determining if the lot is a child lot according to the identification code;~~

~~a child lot calculation module, calculating inherited hold time according to the identification code and the reference database if the lot is a child lot;~~

a designation module, designating second hold time as the sum of the first hold time and the inherited hold time if the lot is a child lot. ~~[[;]]~~

~~a child lot output module, outputting the second hold time and the customer hold time as the hold time if the lot is a child lot; and~~

~~a non-child lot output module, outputting the first hold time and the customer hold time as the hold time if the lot is not a child lot.~~

34. (Currently Amended) The computer system as claimed in claim 33, wherein the first calculation module further obtains the start time of the first lot hold from the reference database, obtains the termination time of the last lot hold from the reference database, and calculates the first hold time according to the start time of the first lot hold and the termination time of the last lot hold.

35. (Currently Amended) The computer system as claimed in claim 33, wherein the customer calculation module further obtains the customer start time of the customer first lot hold from the reference database, obtains the customer termination time of the last customer lot hold from the reference database, and calculates the customer hold time according to the customer start time of the customer first lot hold and the customer termination time of the last customer lot hold.

36. (Currently Amended) The computer system as claimed in claim 33, wherein the reference database is enabled by a MES database.

37-48 (Canceled).

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2. The following is an examiner's statement of reasons for allowance:

3. While U.S. Patents 6,748,287 to Hagen et al and 6,308,107 to Conboy et al (as representatives of the prior art made of record) show calculating a lot hold time through inputted parameters, neither this reference taken alone or in combination with the prior art of record disclose the step of determining if the lot is a split child lot and adjusting the hold time output

Art Unit: 2125

based on the split child lot status obtained from a database. It is this child lot identification and adjusting step, in combination with the remaining elements and features of the invention, that the applicant's invention defines over the prior art of record.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael D Masinick whose telephone number is (571) 272-3746. The examiner can normally be reached on Mon-Fri, 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Picard can be reached on (571) 272-3749. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Application/Control Number: 10/725,239

Page 12

Art Unit: 2125

MDM

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